

RAKOVSKIY, V.Ye.

V 4045. PEAT TAR FROM THE STALIN GLASS WORKS AND WAYS OF USING IT.
Rakovskii, V.E. et al. (Trud. Inst. Tsvit Akad. Nauk Belorussk. SSR
(Trans. Inst. Peat White Russ. S.S.R.), 1953, vol. 2, 131-145; abstr. in
Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1955, (20), 47053). Production /17/
of the following is proposed from the boiling ranges named: 170-225°C,
phenols; 225-270°, creolin; 275-315°C, timber preservatives, cutting oils,
and carbolineum for killing pests in fruit vegetable growing. The tar
yields 40 to 50% pitch, which can be used as an undercoat on roads, for
waterproofing etc.

RAKOVSKIY, V.Y.

✓ 3174. EXAMINATION OF TAR FROM PRESSURE GASIFICATION OF PEAT.
Rakovskii, V.E., Rivkin, Eh. I., Benyushovich, S.I. and Kostinets, T.D. FU
(TGU. NCSN. Turf. Inst. IPGC. Moscow Peat Inst.), 1953, (2), 136-148;
abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1955, (19), 44091). The
tar differs from ordinary peat tar in containing oils which boil off at 180°C.
Deep extraction of oils is obtained by distillation, leaving a residue of only
15-17% pitch. The tar contains more basic than carbon acid volatiles and has
little corrosive effect on ferrous metals. It is thermally stable, so that
distillation conditions do not appreciably affect yields of phenols. This is
also evidence that it has a minimum content of di- and polyhydroxy phenols.
Dephenolization of the oils should be carried out with 10% alkali at a ratio of
1:1. Removal of oils from the phenol should be done by blowing off the oils
at 180°C.

16000

JM 2/2

RAKOVSKIY, V.Ye.; RIVKINA, Kh.I.

Development of the technology for producing creolin from creosote
oils. Trudy Inst.torf. AN BSSR no.2:146-152 '53. (MLRA 8:11)

1. Chlen-korrespondent Akademii nauk BSSR (for Rakovskiy)
(Creolin)

RAKOVSKIY,V.Ye.; RIVKINA,Kh.I., kandidat tekhnicheskikh nauk; ISAYEV,A.I.,
kandidat tekhnicheskikh nauk

Investigation of the bactericidal and disinfectant properties of
creolin extracted from creosote oils. Trudy Inst.torf. AN BSSR
no.2:153-159 '53. (MLRA 8:11)

(Creolin) (Bactericides)

RAKOVSKIY, V.Ye.; RIVKINA, Eh.I.; KONONTSEVA, T.D.; BEYUSHEVICH, S.I.

Physical and chemical properties of peat pitch and the possibility
of using it to produce waterproofing materials. Trudy Inst.torf.
AN BSSR no.2:160-172 '53. (MLRA 8:11)
(Peat industry--By-products)

SHIMANSKIY, V. S.; RAKOVSKIY, V. Ye.; ZHURAVLEVA, A. N.; KADACH, M. V.

Use of peat tar from the Stalin Glass Works in road construction.
Trudy Inst.torf. AN BSSR no.2:173-185 '53. (MIRA 8:11)
(Tar) (Peat)

RAKOVSKIY, V.Ye.

✓ 4051. PROPERTIES OF TAR WATER FROM THE GAS PLANT OF THE STALIN GLASS WORKS. Mol, S.S., Rakovskii, V.E., and Kotkovskii, A.P. (Trud. Inst. Torga Akad. Nauk Belorusssk. SSR (Trans. Inst. Peat White Russ. S.S.R.), 1953,

vol. 2, 186-199; abstr. in Ref. Zh. Khim. (Ref. J. Chem.), 1955, (20), 47052). (9)

The tar water from a peat gasification plant was highly poisonous, but the concentration of water-soluble compounds in it was not high enough for successful treatment. A proposal is made for increasing the concentration.

RAKOVSKIY, V.Ye.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013

USSR

✓ 165. GENERAL THEORY FOR CAKING OF COALS. Rakovskii, V.E. (Izv. Akad. Nauk Belorusssk. SSR (Bull. Acad. Sci. White Russ. S.S.R.), 1955, (3), 91-000). abstr. in Ref. Kh. Khim. (Ref. J. Chem., Moscow), 15 Feb. 1954, (4), 274. Caking is represented as a process of formation and consolidation of multi-ring benzene structures.

RAKOVSKIY, V.; POZNYAK, V.; RAKOVSKAYA, M.; SHIMANSKIY, V.

Problem of the origin of solid fuels. Trudy Inst. torf. AN BSSR
3:79-94 '54. (MLRA 9:3)
(Peat bogs)

RAKOVSKIY, V. Ye.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001

Fuel

✓Chemical composition of some sapropels of the White-Russian S.S.R. V. S. Poznyak and V. E. Rakovskiy, *Trudy Inst. Torfa, Akad. Nauk Belorus. S.S.R.* 3, 109-19 (1954).—Sapropels of the White-Russian S.S.R. differ from other sapropels (Central belt of the U.S.S.R.) by their low content of humic acids (12-17%) and high content of the nonhydrolyzable residue (16-22%). The analysis of sapropels gave the following data for bog deposits and lake-deposits, resp.: ash content 9.94-16.81, 10.66-24.35%; calorific value 5572-6190, 6556-6746; C 53.16-69.87%; H 6.23-68.80%; N 3.67-5.22; 4.14-4.63%; O + S 20.82-35.93, 31.37-33.77%.

Sanya G. Machikova

RAKOVSKII, V. Ye.
RAKOVSKY, V. YE.

✓ Biogeochemical basis of the genesis of fuel. V. Ye.
Rakovskii. Vestsi Akad. Nauk Belarus. S.S.R. 1954.
No. 6, 33-31.—The processes of the synthesis and decompr.
of the org. material, hidden under the mineral cover of the
earth's crust, which result in the formation of the coal and
petroleum deposits are discussed. R. Wiericki

RE 8/1

USSR /Chemical Technology. Chemical Products
and Their Application

Fats and oils. Waxes. Soap.
Detergents. Flotation reagents.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32800

Author : Rakovskiy V. Ye., Rivkina Kh. I.

Inst : Moscow Institute of Peat

Title : Emulsifying Properties of Peat Bitumens in the
Preparation of Phenolic Antiseptics

Orig Pub: Tr. Mosk. torf. in-ta, 1955, No 3, 167-174

Abstract: A study was made of the emulsifying properties,
in the presence of alkali, of the waxy paraffin
containing oil that can not be pressed out, con-
taining 40% wax, of purified peat wax and of a

Card 1/3

USSR /Chemical Technology. Chemical Products
and Their Application

I-29

Fats and oils. Waxes. Soap.
Detergents. Flotation reagents.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32800

mixed emulsifier consisting of wax, soap and bitumens isolated from different varieties of peat. The best emulsifiers of acid peat oils were found to be bitumens from sphagnum-cotton grass peat and sphagnum marsh peat, which in the presence of alkali ensure the production of stable emulsions (E) with hot as well as with cold (30°) water. Bitumens from forest-reed peat and marsh trefoil bog peat yield entirely satisfactory E only with hot water. Addition of soap to the bitumens in the production of preparations of the creolin- and Carbolineum type facilitates the process of preparation of

Card 2/3

USSR /Chemical Technology. Chemical Products
and Their Application

-29

Fats and oils. Waxes. Soap.
Detergents. Flotation reagents.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32800

aqueous emulsions; the preparation has the
following composition: 10 g phenolic oils, 1 g
bitumen, 0.5 g soap, 0.325 g solid KOH. The
latter can be replaced by NaOH, which gives
sufficiently stable aqueous E, but they solidify
on standing and separate on repeated heating.

Card 3/3

RAKOVSKIY, V.Ye.

file 3

General chemical characteristics of peats of Mysorezha S.S.R. (White Russia). V. B. Rakovskii, V. S. Pousnyak, and V. S. Shimanskii. *Izvest. Akad. Nauk Belorus. S.S.R.* 1959, No. 5, 135-47 (in Russian).—Data are tabulated for 16 different kinds of peat regarding their location, botanical compn., ash (1.11-4.0 and 4.0-12.0% for highland and lowland peat, resp.), degree of decompr. of the org. matter, heat-generating capacity (8400-8000 cal./g. dry org. matter), the amts. of C (40.96-64.32), H (4.84-6.49), N (0.73-4.09), and O + S (29.20-41.54% of the dry org. matter, resp.), and the inorg. compn., expressed in percentages of the abs. dry substance and of the amt. of the ash (the amts. of the inorg. constituents in percentage of the abs. dry peat: SiO₂ 0.49-4.95, Fe₂O₃ 0.11-2.09, Al₂O₃ 0.12-1.86, CaO 0.13-4.97, MgO traces-0.58, SO₃ 0.04-1.16, S0.02-0.71, and Na₂O + K₂O 0.07-0.07% resp.). R.W.

15-57-8-11356

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 8,
p 177 (USSR)

AUTHORS: Rakovskiy, V. Ye., Poznyak, V. S., Ratner, A. G.,
Chayhova, V. D.

TITLE: Composition of the Peats of the Belorussian SSR
(Komponentnyy sostav torfov Belorusskoy SSR--in
Belorussian)

PERIODICAL: Izv. AN BSSR. Ser. fiz.-tekhn. n. 1956, Nr 3, pp 97-
108

ABSTRACT: Bibliographic entry
Card 1/1

PIGULEVSKAYA, L.V.; RAKOVSKIY, V.Ye.

Chemical composition of peat-forming accumulations and
its effect on the composition of the peat. Trudy Inst. torf.
AN BSSR 6:3-11 '57. (MIRA 11:7)
(Peat)

PIGULEVSKAYA, L.V.; RAKOVSKIY, Y.Ye.

Changes in the chemical composition of individual types of peat in relation to their age. Age and changes in the content of constituent parts of peats. Report no. 1. Trudy Inst. torf. AN BSSR 6:12-31 '57. (MIRA 11:6)
(Peat)

CHAYKOVA, V.D.; RAFOVSKIY, V.Ye.

Changes in the chemical composition of upland peats in
relation to the degree of decomposition. Trudy Inst. torf.
AN BSSR 6:32-37 '57. (MIRA 11:?)
(Peat)

BATURO, V.A.; RAKOVSKIY, V.Ye.

Chemistry of peat-forming accumulations. Conditions for hydrolysis
and formation of humic acid. Report no.1. Trudy Inst. torf. AN
BSSR 6:38-51 '57. (MIRA 11:7)
(Peat)

BATURO, V.A.; BAKOVSKIY, V.Ye.

Chemistry of peat-forming accumulations. Formation of
humic acid and individual properties of peat-forming materials.
Report no.2. Trudy Inst. torf. AN BSSR 6:52-67 '57. (MIRA 11:7)
(Peat)

POZNYAK, V.S.; RAKOVSKIY, V.Ye.

Lignin in peat. Trudy Inst. torf. AN BSSR 6:80-87 '57.

(Peat--Analysis) (Lignin)

(MIRA 11:7)

POZNYAK, V.S.; RAKOVSKIY, V.Ye.

Amount and composition of bitumens in peat. Trudy Inst. torf. AS
SSSR 6:88-95 '57. (MIRA 11:?)
(Peat--Analysis) (Bitumen--Analysis)

PIGULEVSKAYA, L.V.; RAKOVSKIY, V.Ye.

Changes in the chemical composition of individual types of peat in relation to their age. Age and changes in the composition of bitumens in peat. Report no. 2. Trudy Inst. torf. AN BSSR 6: 110-122 '57. (Peat--Analysis) (Bitumen--Analysis) (MIRA 11:7)

PIGULEVSKAYA, L.V.; RAKOVSKIY, V.Ye.

Changes in the chemical composition of individual types of peat
in relation to their age. Effect of age on the amount and composition
of humic acids in peat. Report no. 3. Trudy Inst. torf. AN BSSR
6:123-129 '57. (MIRA 11:7)
(Peat--Analysis) (Humic acid--Analysis)

MAL', S.S.; RAKOVSKIY, V.Ye.; KOTKOVSKIY, A.P.

Studying tar water produced during the gasification of peat under pressure in a steam-oxygen blast. Trudy Inst. torf. AN BSSR 6:257-265 '57. (MIRA 11:7)

(Peat gasification--By-products)

RAKOVSKIY, V.Ye.; MAL', S.S.

Removing water-soluble compounds from tar water at plants producing
gas from lowland peat. Trudy Inst. torf. AN BSSR 6:266-273 '57.
(MIRA 11:?)

(Peat gasification--By-products)

EL'KIND, L.B.; RAKOVSKIY, V.Ye.

Ways of separating phenols, bases and hydrocarbons. Trudy Inst. torf.
AN BSSR 6:274-290 '57. (MIRA 11:7)
(Phenols)

EL'KIND, L.B.; RAKOVSKIY, V.Ye.

Methods for breaking down pyridine-phenoxyde complexes from
peat oils. Trudy Inst. torf. AN BSSR 6:291-298 '57. (MIRA 11:7)
(Pyridine) (Phenoxydes)

RAKOVSKIY, V.Ye.; PETROV, L.K.; GUREJKO, V.S.; GALENCHIK, I.Z.; POZNYAK,
V.S.; KUNASHKEYICH, V.M.; BELYAL, K.L., red.; KORENEVICH, N.P., red.;
VERZAL, A.I., red.; KOROBENNIKOV, Yu.Ye., red.

[Technological arrangement for the production of mineral wool
sheets with sapropel binding material] Razrabotka tekhnologii
proizvodstva plit iz mineral'noi vaty s sapropelovoi sviazkoj.
Minsk, Izd-vo "Zviazda," 1958. 14 p. (MIRA 12:2)
(Mineral wool) (Sapropels)

RAKOVSKIY, V.Ye., otv.red.; PIDOPLICHIKO, A.P., kand.biolog.nauk, red.;
GOLEMCHIK, I.Z., kand.tekhn.nauk; BARABAIKOVA, Ye., red.izd-va;
VOLOKHANOVICH, I., tekhnred.

[Sapropels and their utilization] Sapropeli i ikh ispol'zovanie; po materialam konferentsii po sapropeliam 1956 g.
Minsk, 1958. 129 p. (MIRA 12:1)

1. AN BSSR, Minsk. Institut torfa. 2. Chlen-korrespondent
AN BSSR (for Rakovsky).
(Sapropels)

BAKOVSKIY V. V.

KARGIN, V.A.
513) P+ PHASE I BOOK EXPLOITATION 307/589
Academy of Sci. SSSR.

Khimiya bol'shikh molekuly obornik stately (Chemistry of large molecules, Collection of Articles) Moscow Izd-vo Akademiya nauk SSSR, 1958. 329 p. (Series: Akademiya nauk SSSR, Nauchno-populyarnaya series) 30,000 copies Printed.

Editor: G.V. Bulovskiy; Resp. Ed.: A.V. Topchiyev; Academician: Ed. of Publishing House: V.A. Bognarik; Tech. Ed.: I.B. Guseva.

NOTE: This book is intended for a wide circle of readers, including those who have had no training in chemistry. It can also serve as a manual for propagandists, teachers, and journalists.

Chemistry of Large Molecules (Cont.)

CONTENTS: This collection of articles reflects the trend for the future development of the Soviet chemical industry as indicated by the May plenary session of the Central Committee of the Communist Party within the framework of the new Seven Year Plan. These articles were published in newspapers and journals. The authors, scientists and industry workers, developed the theme of accelerated development of the chemical laboratory, and science, with stress on the manufacture of organic fibers, plastics, and other materials. Some of the articles were abridged, revised, or enlarged. The articles were collected so as to give an adequate survey of the chemistry of polymers, of high molecular-weight compounds and their properties, of culture, and in the manufacture of various goods. Mentioned are raw materials for the production of polymers. This book belongs to the popular-science library of the Academy of Sciences. Similar volumes are intended for future publication. No references are given.

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Mashkov, A.I. Prospects for the Development of the Chemistry of Synthetic Polymers in Armenia 257
Sparshyan, A.A. Develop the Chemistry of Shales 262
Bogolyubov, R.M. The Rock Which Awaits You 265
Bobrovskiy, V.P. Utilisation of Peat in Chemistry 269
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Semenov, G. N. Wonders of the Macromolecule 275
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Care 7/8

KAGANOVICH, F.L.: RAKOVSKIY, V.Ye. [Rakouski, V.E.]

Selective fractionation of bitumen at low temperatures. Vestsi
AN BSSR Ser. fiz.-tekhn. nav. no.3:117-122 '58. (MIRA 11:10)
(Bitumen) (Distillation, Fractional)

RAKOVSKIY, V.Ye. doktor tekhn.nauk; RIVKINA, Kh.I., kand.tekhn.nauk;
SENINA, R.M., inzh.; TKACHENKO, K.M., kand. tekhn.nauk.

Peat bitumens in molding compounds for precision casting. Torf. prom.
35 no.6:3-6 '58. (MIRA 11:10)

1. Moskovskiy torfyanoy institut. (for Rakovskiy, Rivkina). 2. Nauchno-
issledovatel'skiy institut liteynogo mashinostroyeniya (for Senina,
Tkachenko).

(Precision casting) (Bitumen)

PHASE I BOOK EXPLOITATION

SOV/4109

Rakovskiy, Vladimir Yevgen'yevich, Corresponding Member, Academy of Sciences
Belorusskaya SSR

Tverdoye toplivo kak khimicheskoye syr'ye (Solid Fuel as a Chemical Raw Material)
Moscow, 1959. 31 p. 5,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh
znanii RSFSR.

Ed.: L.M. Gorodenskiy; Tech. Ed.: N.A. Flakserman.

PURPOSE: This pamphlet is intended to acquaint the general reader with the products obtained from coal, peat, and petroleum, as well as with the applications of these products.

COVERAGE: The pamphlet deals with the utilization of coal, peat, and petroleum as raw materials for the chemical industry. It describes the processes used in obtaining these materials and their applications. It lists 22 products obtained by coking coal at high temperature and 23 products by semicoking and

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Solid Fuel (Cont.)

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and gasification of peat. It also lists 33 direct applications of peat and lignite in industry and agriculture. No personalities are mentioned. There are no references.

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Card 2/3

RAKOVSKIY, V.Ye., prof., doktor tekhn.nauk; KAGANOVICH, F.L.; NOVICHKOVA,
Tsvetova, ~~and~~ ANOVA, Ye., red.; SIDERKO, M., tekhn.red.

[Chemistry of pyrogenic processes] Khimiia pirogennykh protsessov.
Minsk, Izd-vo Akad.nauk BSSR, 1959. 208 p. (MIRA 12:12)

1. Chlen-korrespondent AN BSSR (for Rakovskiy).
(Fuel)

RAKOVSKIY, V.Ye.

ХХVIII ИМПЕРСКАЯ ОБРАЗОВАНИЯ
ГЕНДОМАХ ТЮЛИН

Сборник научных трудов
Института химии и технологии полимеров Академии наук СССР

VIII Mandelov Congress for General and Applied Chemistry
Section of Chemistry and Chemical Technology of Polymers,
publ. by Acad. Sci. USSR, Moscow 1979

abstracts of reports submitted to be presented at above mentioned congress,
Moscow, 15 March 1979.

~~RAKOVSKIY~~ V.Ye.

МЕХАНИЗМ ТЕРМИЧЕСКОЙ ДЕСТРУКЦИИ
И СИНТЕЗА КОПСА

Г.А. Некрасова, В.В. Грибкова,
Г.А. Некрасов, О.В. Коновалец, Ю.Н. Руденя

VIII Mendeleyev Congress for General and Applied Chemistry in
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1979

Abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 15 March 1979.

RAKOVSKIY, Vladimir Yevgen'yevich; GOROLENSKIY, L.M., red.; FLAKSERMAN,
N.A., tekhn.red.

[Solid fuel as chemical raw material] Tverdoe toplivo kak khimi-
cheskoe syr'e. Moskva, Ob-vo po rasprostraneniuu polit. i nauch-
nykh znanii RSPFR, 1959. 31 p. (MIRA 13:4)

1. Chlen-korrespondent AN BSSR (for Rakovskiy).
(Fuel) (Chemical industries)

11(0)

PHASE I BOOK EXPLOITATION SOV/3404

Rakovskiy, V. Ye., F. L. Kaganovich, and Ye. A. Novichkova

Khimiya pirogennykh protsessov (Chemistry of Pyrogenic Processes)
Minsk, AN Belorusskoy SSR, 1959. 208 p. Errata slip inserted.
1,500 copies printed.

Sponsoring Agencies: Akademiya nauk BSSR. Institut torfa, and
Moskovskiy torfyanoy institut.

Ed.: Ye. Barabanova; Tech. Ed.: N. Siderko.

PURPOSE: This collection of articles is intended for chemists
studying the mechanism of pyrogenic processes.

COVERAGE: This collection presents the results of research conducted
under the direction of Doctor of Technical Sciences V. Ye. Rakov-
skiy on the mechanism of pyrogenic processes. Chemical structure
and composition of peat and coal of different types are discussed
and illustrated. Major chemical processes of carbonization are
reviewed, and the thermal decomposition of various compounds con-
tained in products of semicoked coal is analyzed along with

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Chemistry of Pyrogenic Processes

SOV. '40

- Kaganovich, F. L., and V. Ye. Rakovskiy. Thermal Decomposition
of Peat in a Stream of Superheated Steam and Processes of
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4-26-60

RAKOVSKIY, V.Ye.; BATURO, V.A.

Study of humic acids in plants forming peat. Trudy Inst. torfa
AN BSSR 7:3-10 '59. (MIRA 14:1)
(Humic acid) (Plants—Chemical analysis)

CHAYKOVA, V.D.; RAKOVSKIY, V.Ye.

Study of a carbohydrate complex in upland-type peats by paper chromatography. Trudy Inst. torfa AN BSSR 7:11-18 '59.
(MIRA 14:1)

(Peat—Analysis)

(Carbohydrate)

RAKOVSKIY, V.Ye.; CHAYKOVA, V.D.

Methods for the recovery of readily hydrolyzable substances from
peat. Trudy Inst. torfa AN BSSR 7:90-95 '59. (MIRA 14:1)
(Peat) (Hydrolysis)

KAGANOVICH, F.L.; SEL'KEVICH, P.I.; RAKOVSKIY, V.Ye.

Composition of peat wax. Report No. 1: Separation of waxes by
low-temperature stage extraction. Trudy Inst. torfa AN BSSR
7:123-130 '59. (MIRA 14:1)

(Peat) (Waxes)

KAGANOVICH, F.L.; BEL'KEVICH, P.I.; RAKOVSKIY, V.Ye.

Composition of peat wax. Report No. 2: Composition of the
saponifiable part of peat wax. Trudy Inst. torfa AN BSSR
7:131-138 '59. (MIRA 14:1)
(Peat) (Waxes)

KADACH, M.V.; BEL'KEVICH, P.I.; RAKOVSKIY, V.Ye.

Refining of peat wax. Trudy Inst. torfa AN BSSR 7:139-147
'59. (MIRA 14:1)

(Peat) (Waxes)

POZNYAK, V.S.; RATNER, A.G.; RAKOVSKIY, V.Ye.

Nitrogen compounds of peat. Trudy Inst. torfa AN BSSR 7:152-161
'59. (MIRA 14:1)
(Peat—Analysis) (Nitrogen compounds)

RAKOVSKIY, V.Ye.; MAZINA, O.I.

Effect of the conditions of gasification on the phenol content
of peat tar. Trudy Inst. torfa AN BSSR 7:162-173 '59.
(MIA 14:1)

(Peat gasification) (Phenols)

RAKOVSKIY, V.Ye.; KOTKOVSKIY, A.P.; MAL', S.A.; EL'KIND, L.B.;
DROZHALINA, N.D.; BARANCHIKOVA, M.I.; VOLOSOVICH, N.S.

Separation of phenols in a continuous distillation of peat tar.
Trudy Inst. torfa AN BSSR 7:187-197 '59. (MIRA 14:1)
(Peat) (Distillation, Fractional) (Phenols)

RAKOVSKIY, V.Ye.; KOTKOVSKIY, A.P.; MAL', S.S.; PASTUKHOV, G.M.;
BARANCHIKOVA, M.I.; VOLOSOVICH, N.S.; DROZHALINA, N.D.;
KASHIRINA, S.V.; MAKEYEVA, G.P.

Results of testing a pilot unit for processing tar water.
Trudy Inst. torfa AN BSSR 7:240-257 '59. (MIRA 14:1)
(Peat gasification) (Industrial wastes)

RAKOVSKIY, V.Ye.; POZNYAK, V.S.; SLIVKA, Z.M.

Use of sapropel as a cementing substance. Trudy Inst. torf. AN BSSR
9:254-259 '60. (MIRA 14:2)

(Sapropel)

RAKOVSKIY, V.Ye.; ZHURAVLEVA, A.N.

Mechanism of the formation of pitch coke. Trudy Inst. torfa
AN BSSR 7:258-265 '59. (MIRA 14:1)
(Coke)

POZNYAK, V.S.; POVARKOVA, S.S.; RAKOVSKIY, V.Ye.

Chemical study of the sapropels of White Russia; chemical composition of sapropels from the Molodechno Province. Report No. 1. Trudy Inst. torfa AN BSSR 7:266-281 '59. (MIRA 14:1)
(Molodechno Province—Sapropels)

RAKOVSKIY, V.Ya., doktor tekhn.nauk; RIVKINA, Eh.I., kand.tekhn.nauk;
KUNIN, A.M., kand.tekhn.nauk; MAYZHENBERG, M.M., inzh.

Peat bakelites in the manufacture of sawdust boards. Torf.
prom. 36 no.8:8-12 '59. (MIRA 13:3)

1. Kalininckiy torfyanoy institut (for Mayzenberg).
(Peat) (Phenol condensation products)

BATURO, V.A. [Batura, V.A.]; SHINKAREVA , T.A. [Shynkarova, T.A.];
KURBATOVA-BELIKOVA, N.M. [Kurbatava-Belikava, N.M.];
RAKOVSKIY, V.Ye. [Rakouski, U.IA.]

Changes in the chemical composition of peat-forming plants
during artificial decomposition. Vestsi AN BSSR. Ser. Fiz.-
tekhn. nav. no. 4:85-92 '60. (MIRA 14:1)
(Peat) (Plants--Chemical analysis)

MAL', S.S.; VOLOSOVICH, KOTKOVSKIY, A.P.; RAKOVSKIY, V.Ye.

Products obtained by the processing of the tar water from peat
gasification. Trudy Inst. torf. AN SSSR 9:265-295 '60.
(MIRA 14:2)

(Peat gasification)

FILIMONOV, V.A.; RAKOVSKIY, V.Ye.

Exothermal and endothermal reactions in the decomposition of peat
[with summary in English]. Inzh.-fiz. zhur. 4 no.3:18-25 Mr '61.
(MIRA 14:8)

1. Energeticheskiy institut im. G.M. Krzhizhanovskogo AN SSSR
i Kalininskiy torfyanoy institut, g. Moskva.
(Chemical reaction, Heat of) (Peat)

DROZHALINA, N.D.; RAKOVSKIY, V.Ye.

Specific surface of peat coke. Dokl. AN BSSR. 5 no.11:494-496 II
'61. (MIRA 15:1)

1. Institut torfa AN BSSR.
(Coke) (Adsorption)

RAKOVSKIY, V.Ye.; MAL', S.S.; VOLOSOVICH, N.S.

Formation and composition of water-soluble products of thermal de-composition of peat. Dokl. AN BSSR 5 no.12:558-560 D '61.
(MIRA 15:1)

1.. Institut torfa AN BSSR.
(Peat gasification) (Tar)

DROZHALINA, N.D.; RAKOVSKIY, V.Ye.

Reacticity of peat coke. Khim.i tekhn.topl.i masel 6 no.12:12-
21 D '61. (MIRA 15:1)

1. Institut torfa AN BSSR.
(Coke) (Peat)

MAYZENBERG, M.M., inzh.; RAKOVSKIY, V.Ye., doktor tekhn.nauk;
RIVKINA, Kh.I., kand.tekhn.nauk; KUNIN, A.M., kand.tekhn.nauk

Synthesis of resol resin by the condensation of peat phenols
with formaldehyde in an oil medium. Torf. prom. 38 no.8:24-
25 '61. (MIRA 14:12)

1. Kalininskiy torfyanyi institut (for Kunin).
(Phenol condensation products)
(Peat)

RAKOVSKIY, V.Ye., doktor tekhn.nauk, prof.; VOLKOV, V.Z., inzh.

Dissociation of nitrogen compounds over peat coke packings.
Torf.prom. 39 no.3:21-24 '62. (MIRA 15:4)

1. Institut torfa AN BSSR (for Rakovskiy). 2. Kalininskij
torfyanoy institut (for Volkov).
(Peat) (Coke)

Thermal decomposition of certain organic acids. ib. 1:244-5.
Iron oxide. Trudy Katal. inst. na. 13110-53-103.

Effect of the speed of heating and the size of particles on the thermal decomposition of milled peat. ib. 1:244-5.

DROZHALINA, N.D. [Drazhalina, N.D.]; RAKOVSKIY, V.Ye. [Rakouski, V.IA.]

Chemical structure of the surface of peat coke and its
reactivity. Vostoi AN BSSR.Ser.khim.nau. no.2:79-83 '65.
(MIRA 18:12)

RAKOVSKIY, V.Ye. [Rakouski, U.IA.]; LUKOCHKO, Ye.S. [Lukoshka, A.S.]

Chemical characteristics of protohumic acids and
unhydrolyzable residues of peat-forming plants of
various ages. Vestsi AN BSSR.Ser.khim.nau. no.2:84-89
'65. (MIRA 18:12)

RAKOVSKIY, V. Ye. (Prof. Dr.)

"Der Stand der Moorforschung" (Arbeitstitel).

paper submitted for 9th Intl Cong, Moorland Research, Budapest & Keszthely, Hungary, 11-17 Sep 1965.

VERNER, V.P.; RAKOVSKIY, V.Ye.

Method for studying the chemical composition of peat of a low degree of decomposition. Dokl. Akad. Nauk SSSR 8 no.11:77-780 N 161.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut torfa Gosudarstvennogo komiteta po toplivnoy promyshlennosti SSSR.
(MIRA 18:3)

GORBUKOVICH, G.D., red.; OPEYKO, F.A., red.; RAKOVSKIY, V.Ye.,
red.; SELITRENNIKOV, A.I., red.; SHIVANSKIY, V.S., red.
KOLCHUSHKIN, V.I., red.

[Overall utilization of peat] Kompleksnoe ispol'zovanie
torfa. Moskva, Nedra, 1965. 237 p. (MIRA 18:5)

i. Vsesoyuznyy nauchno-issledovatel'skiy institut torfa.

RAKOVSKIY, V.Ye.; PIGULEVSKAYA, L.V.

Evolution of the atmosphere, plants and fuel. Dokl. AN BSSR
7 no.10:688-692 O '63. (MIRA 16:11)

J. Institut torfa AN BSSR.

RAKOVSKIY, V. Ye.; BATURA, V. A.; PIGULEVSKAYA, L.

"Types of humus fuel and their formation."

Report submitted for the 2nd International Peat Congress, Leningrad,
15-22 Aug 63.

RAKOVSKIY, V. Ye.; KUNIN, D.; ANTONOVA, T. N.

"Chemical and heat processing of peat."

Report submitted for the 2nd International Peat Congress, Leningrad,
15-22 Aug 63.

ERDMAN, M.E.; MAL', S.S.; RAKOVSKIY, V.Ye.

Determination of nitrogen in some heterocyclic compounds by
the Kjeldahl semimicromethod. Zav. lab. 29 no.9:1058-1059 '63.
(MIRA 17:1)

1. Institut torfa AN BSSR.

RAKOVSKIY, V.Ye., doktor tekhn.nauk; VOLKOV, V.Z., inzh.

Pyrolysis of pyridine and quinoline over peat coke beds. Torf.prom.
40 no.1:28-30 '63. (MIRA 16:5)

1. Kalininskiy torfyanoy institut (for Volkov).
(Pyridine) (Quinoline) (Pyrolysis)

FEDOROV, N.A.; BELYANOVA, Ye.M.; GRIDNEVA, K.I.; RAKOVSKIY, V.Ye.;
KUNIN, A.M.; YAKOB, N.S.

Composition and ways of using the liquid products of under-ground gasification of coals. Nauch. trudy VNIPodzemgaza
no.8:95-103 '62. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut podzemnoy
gazifikatsii ugley, Kalininskiy torfyanoy institut i Vsesoyuznyy
nauchno-issledovatel'skiy institut udobreniy i agropochvo-
vedeniya.

(Coal gasification, Underground--By-products)

AKKHAZI, V.I.; ANTONOV, V.Ya.; BLYUMENBERG, V.V.; VARENTSOV, V.S.;
VELLER, M.A.; ZYUZHIN, V.A.; IVANOV, V.N.; KUZHMAN, G.I.;
LUKIN, A.V.; MATVEYEV, A.M.; OZEROV, B.N.; PAL'TSEV, A.G.;
PEROV, N.P.; PROKHOROV, N.I.; RAKOVSKIY, V.Ye.; SEMENSKIY, Ye.P.;
SCLOPOV, S.G.; TYUREMNINOV, S.N.; TSUPROV, S.A.; CHULYUKOV, M.A.

Viktor Georgievich Goriachkin; obituary. Torf.prom. 39 no.4:40
(MIRA 15:7)
'62.
(Goriachkin, Viktor Georgievich, 1893-1952)

DROZHALINA, N.D.(Minsk); RAKOVSKIY, V.Ye.(Minsk)

Mechanism of gas formation during peat pyrolysis. Izv. AN SSSR.Otd.
tekhn.nauk. Mat. i topl. no. 91220-226 S-0 '62. (MIRA 15:10)
(Peat) (Pyrolysis)

RAKOVSKIY, V.Ye.; VOLKOV, V.Z.

Changes in the specific surface area of peat cokes in the process
of pyrolysis. Khim.i tekhn.topl.i masel 8 no.1:42-45 Ja '63.

1. Institut torfa AN Belorusskoy SSR i Kalininskiy torfyanoy
institut.

(Peat) (Coke) (Pyrolysis)

DROZHALINA, N.D. (Minsk); RAKVOSKIY, V.Ye. (Minsk)

Mechanism of gas formation during peat pyrolysis. Izv. AN SSSR. Otd.
tekhn. nauk. Met. i topl. no. 5:220-226 S-0 '62. (MIRA 15:10)
(Peat) (Pyrolysis)

RAKOVSKIY, E.I., inzhener.

Laying asphalt concrete pavements in low temperatures with light
surface treatment. Avt.dor. 19 no.1:18 Ja '56. (MLRA 9:5)
(Pavements, Concrete--Cold weather conditions)

PROCESSES AND PRODUCTS OF TAR

The chemical conversion of peat tar. II. V. Nakayashii, Khim. i Tekhn. Polos, 1, No. 8, 42 (1930). - Medullin (1) and Gusev (2) peat analyzed (1) H₂O 14.05, ash 2.08, N 0.13, N 1.06, H 5.91, C 59.64%; heating value 5703 cal./dry. basis; alk.-benzene-extractable bitumens 19.04, seminef. 36.32, tar 17.60, tar H₂O 20.08, pyrogenetic H₂O 13.83 and gas 10.14%; (2) H₂O 16.71, ash 3.43, S 0.16, N 1.20, H 5.92, C 58.09%, heating value 5630 cal./alk.-benzene-extractable bitumens 11.20, seminef. 35.20, tar 10.72, tar H₂O 30.02, pyrogenetic H₂O 18.21 and gas 17.02%. The primary gases were composed of CO₂ 50.6, C₂H₂ 2.05, CO 15.4, O 2.18, H₂ 7.5, CH₄ 8.10, C₃H₈ 10.6 and N₂ 9.5%. The properties of tar (1) obtained in a coking plant and (2) in a gas producer were, resp.: H₂O 2.29, 3.43; ash 0.14, 0.05; N 0.09, 1.00; S 0.28, 0.005; H 10.08, 9.11; C 73.9, 75.84; O 14.85, 13.80%; heating values 5643, 5617 cal.; pour points 26, 32%; Brenken flash 120, 115°; viscosity at 20° 5.02, 22.6; sp. gr. at 15° 0.907, 0.99; insol. in xylene 3.82, 0.8%; insol. in petroleum ether 13.04, 35.72; insol. in gasoline 3.02, —; insol. in pyridine 0.85, —; asphaltene 8.44, 30.0; phenols (Graef) 13.5, 33; paraffin 0.54, 13.0; fractions b, below 200° 3.0, 1.0; b. to 300° 62, 41; and b. to 320° 77, 60%. The low gasoline content probably was due to losses in the light fractions during the carbonization. The tars from peat are characterized by the presence of 7-8% of heat waves which are a mixt.

of high mol. acids and esters, 0.180.2, without no 106 and sapon. no. 115. They have a fine crystal structure and are similar to montan waxes from brown coal. To protect these substances from decompr. resins and asphaltenes must be removed from the tar by dig. it with a light gasoline and treating with dil. H₂SO₄; bases also are removed. The soln. is cooled to 10-12° and the waxes are sepd. The paraffin is obtained from the soln. by cooling to 0° to —1°; it m. 46-8° and amounts to 4-5% of the tar. If the waxes are not removed emulsions are obtained in the further sepn. of the phenols which can be almost completely distd. below 250°; 50% constitutes actual phenol and cresol fractions. The crude phenols from (2) contain about 15% of carboxylic acids. Tar (1) contained carboxylic acid 1, tricresols 3, xylenols 3 and higher phenol homologs 3%. The fraction remaining after the sepn. of phenols consists of neutral oils (contg. neutral O compds., olefins, small amts. of aromatic compds. and about 30% of satd. compds.). It can only be used as fuel or as Diesel oil. The asphaltenes which hold about 0.7% of the oil and constitute about 2% of the tar can be used for the prepn. of pitch, which is very brittle, contains water-sol. ingredients and is oxidized on being stored. A scheme for working-over the above tars is proposed. A. A. Bozhilov

ASA-11A METALLURGICAL LITERATURE CLASSIFICATION

1930-31 1931-32 1932-33 1933-34 1934-35 1935-36 1936-37 1937-38 1938-39 1939-40 1940-41 1941-42 1942-43 1943-44 1944-45 1945-46 1946-47 1947-48 1948-49 1949-50 1950-51 1951-52 1952-53 1953-54 1954-55 1955-56 1956-57 1957-58 1958-59 1959-60 1960-61 1961-62 1962-63 1963-64 1964-65 1965-66 1966-67 1967-68 1968-69 1969-70 1970-71 1971-72 1972-73 1973-74 1974-75 1975-76 1976-77 1977-78 1978-79 1979-80 1980-81 1981-82 1982-83 1983-84 1984-85 1985-86 1986-87 1987-88 1988-89 1989-90 1990-91 1991-92 1992-93 1993-94 1994-95 1995-96 1996-97 1997-98 1998-99 1999-2000 2000-2001 2001-2002 2002-2003 2003-2004 2004-2005 2005-2006 2006-2007 2007-2008 2008-2009 2009-2010 2010-2011 2011-2012 2012-2013 2013-2014 2014-2015 2015-2016 2016-2017 2017-2018 2018-2019 2019-2020 2020-2021 2021-2022 2022-2023 2023-2024 2024-2025 2025-2026 2026-2027 2027-2028 2028-2029 2029-2030 2030-2031 2031-2032 2032-2033 2033-2034 2034-2035 2035-2036 2036-2037 2037-2038 2038-2039 2039-2040 2040-2041 2041-2042 2042-2043 2043-2044 2044-2045 2045-2046 2046-2047 2047-2048 2048-2049 2049-2050 2050-2051 2051-2052 2052-2053 2053-2054 2054-2055 2055-2056 2056-2057 2057-2058 2058-2059 2059-2060 2060-2061 2061-2062 2062-2063 2063-2064 2064-2065 2065-2066 2066-2067 2067-2068 2068-2069 2069-2070 2070-2071 2071-2072 2072-2073 2073-2074 2074-2075 2075-2076 2076-2077 2077-2078 2078-2079 2079-2080 2080-2081 2081-2082 2082-2083 2083-2084 2084-2085 2085-2086 2086-2087 2087-2088 2088-2089 2089-2090 2090-2091 2091-2092 2092-2093 2093-2094 2094-2095 2095-2096 2096-2097 2097-2098 2098-2099 2099-20100 20100-20101 20101-20102 20102-20103 20103-20104 20104-20105 20105-20106 20106-20107 20107-20108 20108-20109 20109-20110 20110-20111 20111-20112 20112-20113 20113-20114 20114-20115 20115-20116 20116-20117 20117-20118 20118-20119 20119-20120 20120-20121 20121-20122 20122-20123 20123-20124 20124-20125 20125-20126 20126-20127 20127-20128 20128-20129 20129-20130 20130-20131 20131-20132 20132-20133 20133-20134 20134-20135 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20218-20219 20219-20220 20220-20221 20221-20222 20222-20223 20223-20224 20224-20225 20225-20226 20226-20227 20227-20228 20228-20229 20229-20230 20230-20231 20231-20232 20232-20233 20233-20234 20234-20235 20235-20236 20236-20237 20237-20238 20238-20239 20239-20240 20240-20241 20241-20242 20242-20243 20243-20244 20244-20245 20245-20246 20246-20247 20247-20248 20248-20249 20249-20250 20250-20251 20251-20252 20252-20253 20253-20254 20254-20255 20255-20256 20256-20257 20257-20258 20258-20259 20259-20260 20260-20261 20261-20262 20262-20263 20263-20264 20264-20265 20265-20266 20266-20267 20267-20268 20268-20269 20269-20270 20270-20271 20271-20272 20272-20273 20273-20274 20274-20275 20275-20276 20276-20277 20277-20278 20278-20279 20279-20280 20280-20281 20281-20282 20282-20283 20283-20284 20284-20285 20285-20286 20286-20287 20287-20288 20288-20289 20289-20290 20290-20291 20291-20292 20292-20293 20293-20294 20294-20295 20295-20296 20296-20297 20297-20298 20298-20299 20299-20300 20300-20301 20301-20302 20302-20303 20303-20304 20304-20305 20305-20306 20306-20307 20307-20308 20308-20309 20309-20310 20310-20311 20311-20312 20312-20313 20313-20314 20314-20315 20315-20316 20316-20317 20317-20318 20318-20319 20319-20320 20320-20321 20321-20322 20322-20323 20323-20324 20324-20325 20325-20326 20326-20327 20327-20328 20328-20329 20329-20330 20330-20331 20331-20332 20332-20333 20333-20334 20334-20335 20335-20336 20336-20337 20337-20338 20338-20339 20339-20340 20340-20341 20341-20342 20342-20343 20343-20344 20344-20345 20345-20346 20346-20347 20347-20348 20348-20349 20349-20350 20350-20351 20351-20352 20352-20353 20353-20354 20354-20355 20355-20356 20356-20357 20357-20358 20358-20359 20359-20360 20360-20361 20361-20362 20362-20363 20363-20364 20364-20365 20365-20366 20366-20367 20367-20368 20368-20369 20369-20370 20370-20371 20371-20372 20372-20373 20373-20374 20374-20375 20375-20376 20376-20377 20377-20378 20378-20379 20379-20380 20380-20381 20381-20382 20382-20383 20383-20384 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CM

22

Kashmir oil from the shale of Kashir. E.-V. RAKOVSKII AND S. I. SOKOLOV. Zhar. Prikladnoi Khim. 3, 81-9 (1930).—A neutral oil obtained from the high-boiling fractions of Kashir shale oil and refined with weak H_2SO_4 and NaOH followed by washing with 55% H_2SO_4 had the following characteristics: d_{40}^{20} = 0.8807, n_{D}^{20} = 1.4767, chem. compn. C 77.65, H 10.70, S 8.85, O 2.40%. On redistn., the oil was partially decomprd. 2.01% dinit. below 130°, 14.34% below 150°, 74.17% below 200°, and 92.79% below 235°. The max. fractions were at 160-70° and 180-0°. The oil was very reactive. By shaking with 1.5 vols. of H_2SO_4 , the contraction was with 55% acid 1%, 75% acid 10%, 85% acid 38%, 95% acid 75%. KMnO₄ in the presence of H_2SO_4 is quickly decolorized by the oil but the end point is indistinct. Hg salts give a heavy yellowish ppt., which increases on standing. Anhyd. AlCl₃ reacts violently with evolution of HCl and H₂S and with formation of dark-colored resins. With HNO₃ explosions occur and oxides of N are evolved. Halogens form addn. and substitution products. The oil is insoluble in all proportions with the common org. solvents and with SO₂. Satd. compds. were sepd. from the unsatd. by dissolving the oil in MeOH and by adding H₂O to the soln. The residue from fuming-HNO₃ treatment contained paraffins (C₁-In with admixt. of C₁-In). By gradually adding to the oil H_2SO_4 of increasing strength, a mixt. of paraffins and naphthenes was obtained. The phenylhydrazone method of Pfeff and Kreutzer (C. A. 17, 3777) showed the presence of a ketone (C₆H₅CO). The approx. compn. of the 150-60° fraction was detd. as: S compds. 42.6, O compds. 23.9, paraffins 2.5, naphthenes 5.5, unsatd. 25.5%; and of the 180-00° fraction as: S compds. 35.9, O compds. 35.4, paraffins 6.1, naphthenes 0, unsatd. 22.6%. Comparison of the results with those of Heuser (Ber. 25, 1665(1892); 28, 486(1895); 30, 2745(1897); Z. Angew. Chem. 9, 284, 318(1896)) shows that the oil is radically different from the shale oils of Scotland.

V. KALICHOVSKY

ASIN-5544 METALLURGICAL LITERATURE CLASSIFICATION

ca

Peat bitumen. N. V. RABOVSKII AND P. G. BORISHEVSKII. Khimika Prirodop. Teplof. 2, No. 2, 16-24 (1971) 22PbC from Redkinski swamp contained 10.05% ash, 0.45% S, 2.08% N, 02.14% C (in the org. mass), 2.08% (in the living part). The heat capacity of the dry substance was 5343 calories, of the org. mass 5218 calories. The bitumen after extr. with a benzene-alc. mixt. (1:1) yielded bitumen (on dry substance) 10.04%, m. 09° (Kraemer-Sarnow); it contained 74.47% C, 10.63% H, 0.3% N (Kjeldahl), with acidity 79, sapon. no. 144. The bitumen was purified and the wax constituents were sepd. from the resins. The resins (33%) contained 54.5% of crude resinic acids. The wax constituents contained 50% of crude fatty acids of which $C_{10}H_{18}$, $C_{11}H_{20}$, and $C_{12}H_{24}$ were isolated, while 43% constituted esters and unsaponifiable substances. The resins yielded the following acids: $C_{10}H_{18}$ and $C_{11}H_{20}$. A. A. BORISHEVSKII

21

Sepropelites from Trans-Angara and their conversion into a liquid fuel. E. V. Rakovskii, M. M. Prudnikova and A. D. Khudyakova. *Khim. Tverdogo Upruga*, 2, No. 3, 13-21 (1981). Low-temp. carbonization of these sepropelites yield up to 38% tar content, a) 40°; b, below 200 and 500°; b, below 300°. The pitch is characterized by low tar (3%), S (0.3%) and phenol (3.5%) and high paraffin content. A. B. Radchenko

A. Thriftsgard

CA

7

Changes in fiber in a peat bog. E. V. RAKOVSKII AND V. A. VERSOTSKAYA
Khim. Tsvetnoy Toplira 2, No. 11-12, 80-92 (1931).—The properties of a freshly cut pine tree were compared with those from a tree submerged in a peat bog for 150-200 years. The air-dry fresh pine tree (I) had 0.05-0.08% ash while the old pine tree (II) had 0.26-0.77%. The solubilities of the fibers were: I 9.45% in hot water and 5.49% in cold water; II 3.12-5.80% and 0.02-2.60%; the yields of the ether exts. were: I 1.57-0.08%; II 10.19-12.67%; and of the alc.-benzene exts. 0.16-0.03%; and 0.1%; resp. The chem. compns. were: I pentosans 6.82-9.78, hemicellulose 15.69-18.41, cellulose 28.25-32.08 and lignin 29.05-29.84%; II 5.79-8.45, 11.08-16.31, 27.71-34.93 and 29.12-32.33%, resp. I contained according to Willstatter 11.29-13.77% and II 11.98-12.37% MeOH. Humic substances were 0 and 19.5%, resp. Properties of the resins, compns of tarry substances, acid nos. of the ether exts., contents of fatty and resinous substances, analyses of the alc.-benzene exts. and resin analyses from both types of trees are given.

A. A. ROMANOV

Bituminous shale as fuel in industry in connection with its composition. B. V. Rukavina. Bituminous Shale and Its Techn. Utilization, Lakhinskoe (Leningrad) 1932, 121-49.—Russian shales contain H₂O 0.5-15.0 and ash 30.3-69.3%. The calorific value is 10,000-47,000. They yield tar 4.7-31%, semicokes 46.0-77.5, H₂O 8.6-13.3, gas 4.0-14.1, H₂ 2.4-6.19, C 17.9-52.0%. The ash contains SiO₂ 32.0-46.8, P₂O₅ 17.1-22.7, CaO 10.92-35.2, MgO 0.5-2.7, SO₃ 0.3-11.7 and alkalies 1.0-8.2%. The gas obtained from distillation contains H₂S 4.0-34.81, CO₂ 11.34-19.2, C₂H₆ 5.05-16.8, O₂ 0.01-0.8, CO 3.54-9.40, H₂ 13.57-23.24, CH₄ 2.0-13.60, C₃H₈ 5.05-21.2 and N₂ 6.48-17.31%. The results obtained in burning these shales under boilers are discussed. A cement prepared with the use of bituminous shale for fuel had a quality close to the specification requirements. The S contained in shale is present to the extent of 70% in the organic mass, and 19-20% is of the pyrite-S variety. In the phenol fraction of the shale tar were detected thiophene, 2-methylthiophene (2-thiethene), 2,3-dimethylthiophene (2,3-thiethene), 2-ethylthiophene, 3-propylthiophene, 2-isopropylthiophene, 2-butylthiophene, tetrahydrothiophene, thiophenaphthalene, C₆H₅Na, benzene, octane, nonane and decane. A. A. B.

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Hydrolysis of carbohydrates of moss sphagnum medium
E. V. Rakovskii and E. V. Zatsepina. *Khim. Prirody*
1969, 3, 294-300 (1972). Analyses of the sphagnum before
and after hydrolysis with HCl are given. A. V. B.

Sulfur from oil shale. E. V. Rakovskii, F. I. Samn and A. P. Yudkevich. *Vestn. Tsvetnoy Metallurgii* 3, 61-73 (1962). An activated C prep'd. from peat and shale coke is able to hold large amounts of S which may be present in gas as H₂S. The gas is passed together with air through the C layer at a temp. of about 120°. The S may be extd. from the C by org. or inorg. solvents, the activity of C not being affected after use, although the loss amounts to about 10% after each extn. The septd. S is of the same quality as refined S. This method permits the extn. of S from gases high in S compds. A. A. Bochilinsk

ASD-SEA METALLURGICAL LITERATURE CLASSIFICATION

SCIENTIFIC

1960-64 METALLURGY

1960-64 METALLURGY

W

21

The physical-chemical characteristics of coals from
the Karagashin deposit. E. V. Rakovskii. Atom.
Tverdoe Toplino 3, 348-60 (1982). - Results of proximate
and ultimate analyses, solvent extrn., low-temp. distn.
ways, and compo. of gas and tar are given. A. A. B.

ASIA-LIA METALLURGICAL LITERATURE CLASSIFICATION

Sandy coal from the Moscow basin. R. V. Makovskii and K. I. Sushkov. *Khim. i Tekhnol. Tverdogo Stroitel'stva* 2, 289-290 (1962). Coal from some of the pits showed enclosures of shale and pyrite. The coal was composed of fusin. It was subjected to distillation in a Fischer retort. The bitumen sept. was completely adsorbed in NaOH soln.; and partially in Na_2CO_3 . Its adsorption ability for I after drying and grinding was low in comparison with the raw coal, amounting to 1.18 mg. per mol. g. of I as compared with 1.42 for the raw coal. The humic acids which were exptd. after drying and grinding also had low activity, which amounted to 1.22 mg. per mol. g. The adsorption was effected by shaking for 15 min. in 25 cc. of a 0.01 N soln. of I with 0.5 g. coal. The liquid was then filtered through glass wool and titrated with $\text{Na}_2\text{S}_2\text{O}_3$. The loss of I was recorded, per g. of coal and was directly expressed in mg. The

first activation expts. of the coal were effected with steam; the results depended mainly on the duration of the heating, the amt. of steam used and the temp. of the process. Heating for 4 hrs. was best. To lower the high ash content of the coal, which affects the adsorption properties, the material was treated with HCl (10% soln.) and crushed to complete disappearance of all traces of Cl. This method did not improve the properties, because the ash was not removed; however, the activity was greatly improved through a preliminary caustic treatment, followed by washing with acid. Further investigations were carried out with washed coal which contained after the process, only 8.50-18.47% ash and 10.70-14.10% H_2O . This coal after steam treatment was superior to a no. of known brands of adsorption carbons. A. A. Rechtinek

Phenols from the tar of Kashpir shale. B. V. Rakovskii and D. N. Andrievskii. Akim, Tverdogo Teplovoi, no. 107(1932).—The phenols sepd. from the Ostashkov phenolates contain only 27.5% of more or less stable acidic substances which distil below 215° at 6 mm., whereby 29.2% pitch is left. The balance, except 0.75% of acids, constitutes neutral substances and acidic asphaltenes, which in part are emulsified with the phenolates and which are obtained from unstable acidic products. The neutral oil is composed of O-contg. substances with a carbonyl group. All the stable acidic phenol parts contain S, the fraction boiling below 230° at atm. pressure contg. 0.5-0.8% S and the others 3.5%. A repeated conversion of phenols sepd. from phenolates in the Ostashkov plant, carried out via the phenolates, followed by air blowing of the obtained alk. solns. and washing with ether, produces air-stable phenols in alk. solns. The high-boiling, S-contg. fractions resist decompn. when heated to 700°, while the lighter ones decompose. Among the ether solns. of the fractions a 20% soln. exists.

ASA-SEA METALLURGICAL LITERATURE CLASSIFICATION

from the lower fractions a product higher in S than those left over in the ether extractable with alkalies! NH₄OH has practically no effect on the higher-boiling fractions. Carboxic acid was not detected while creosols and xylenols (fraction b. 200-225°) amount to 2.46% of the wt. of the crude phenols. More or less stable phenols with a S

content of up to 0.8% and boiling up to 230° are present up to 3.0% in the crude phenols. The remaining 24.4% of the stable acidic products distil at higher temps. The S content in the lower-boiling fraction may be lowered to 0.31% through condensation with molasses, though attempts to remove the S from the higher-boiling fractions were unsuccessful. One of the highest-boiling fractions could be crystd. after the application of the differences in the degree of hydrolysis, polymerization and the difference in the solv. of the phenols in mixts. of ether with petroleum ether. A. A. Bochtingk

The oxidation of coal. The long flame coals from the Moscow basin. B. V. Rakovskii and R. V. Votova-Akhim. Tverdogo Teplofizika 37, 701-707 (1982). The Main element and other autoignition tests were investigated. The ignition temp. and the active surface calcd. by the A. A. Bochtingk method coincide.

ASSISTANT METALLURGICAL LITERATURE CLASSIFICATION

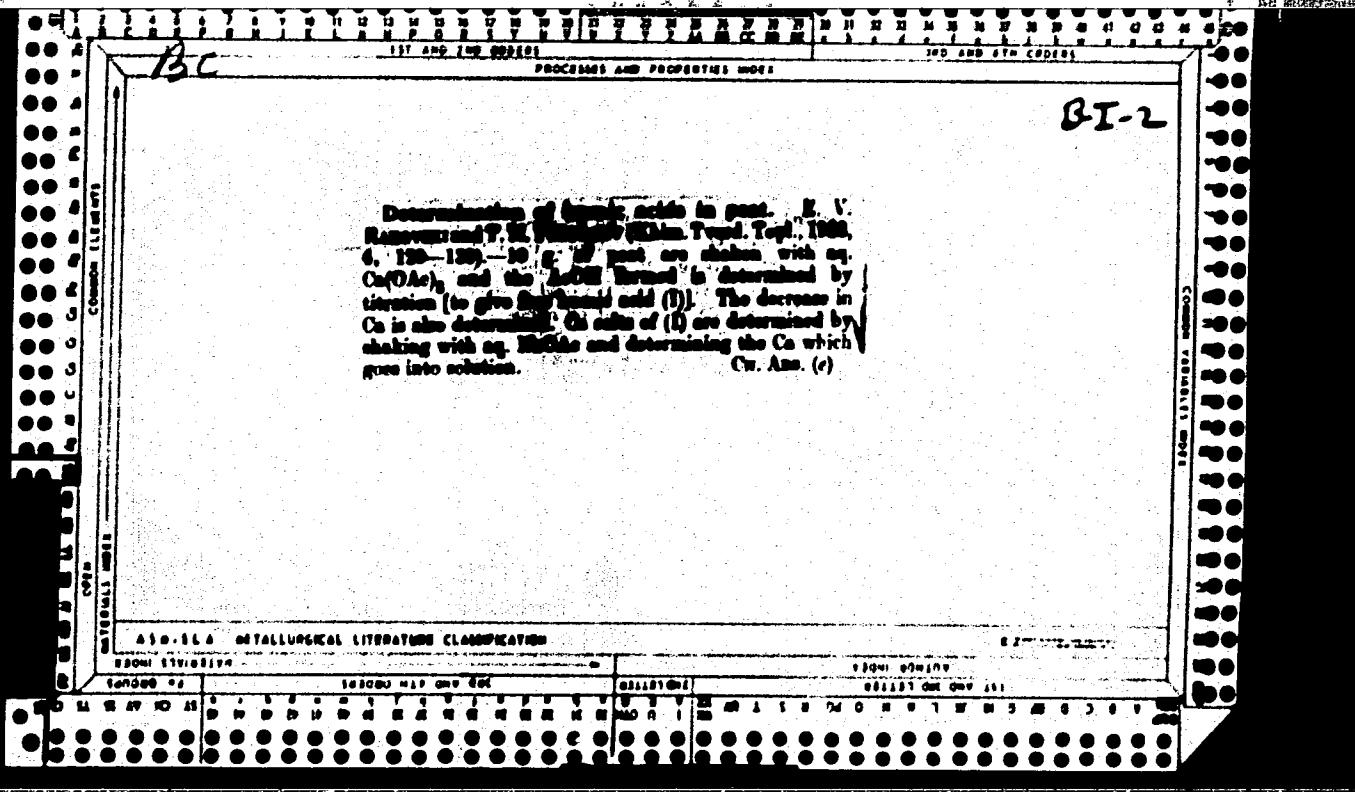
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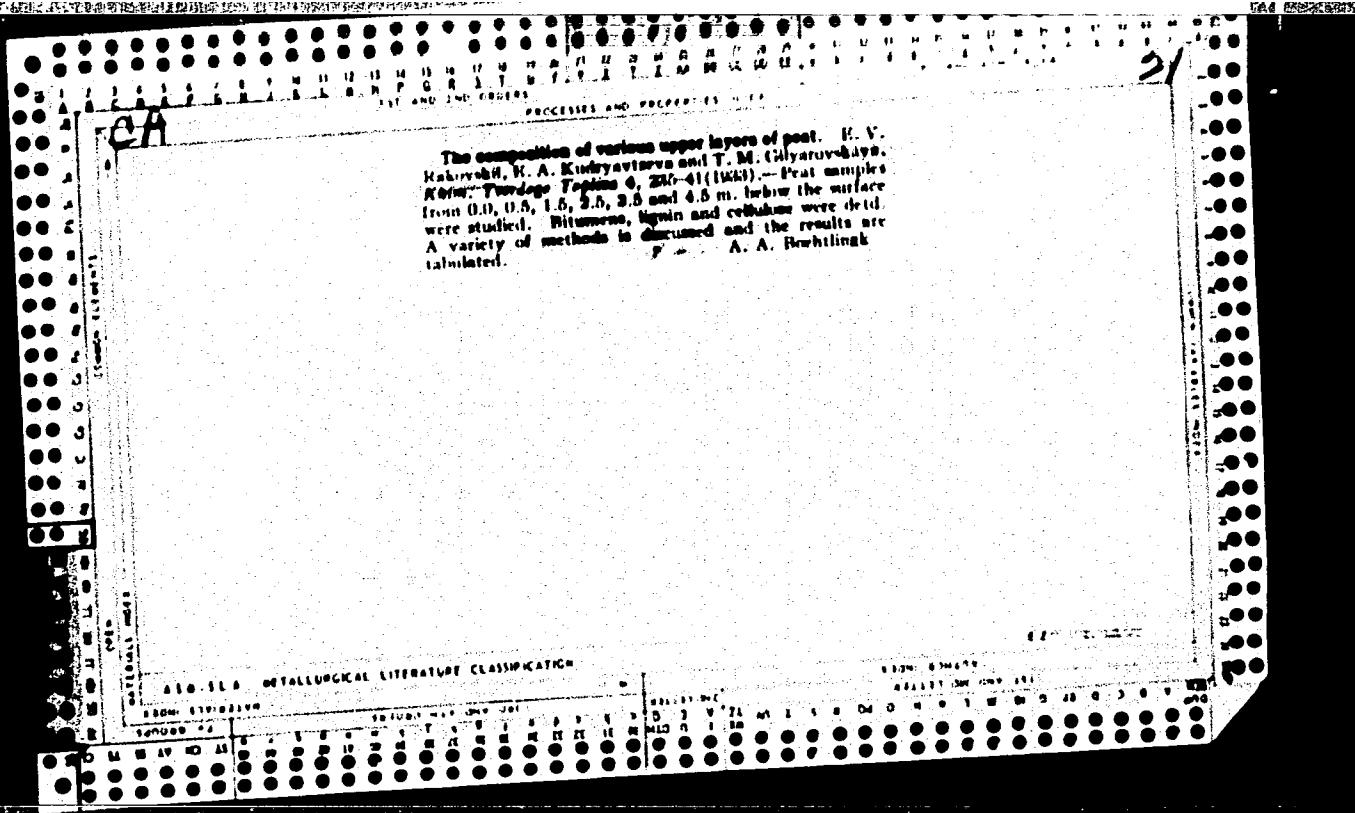
"Organicheskaya naissa goryuchikh slantsev", P. 42

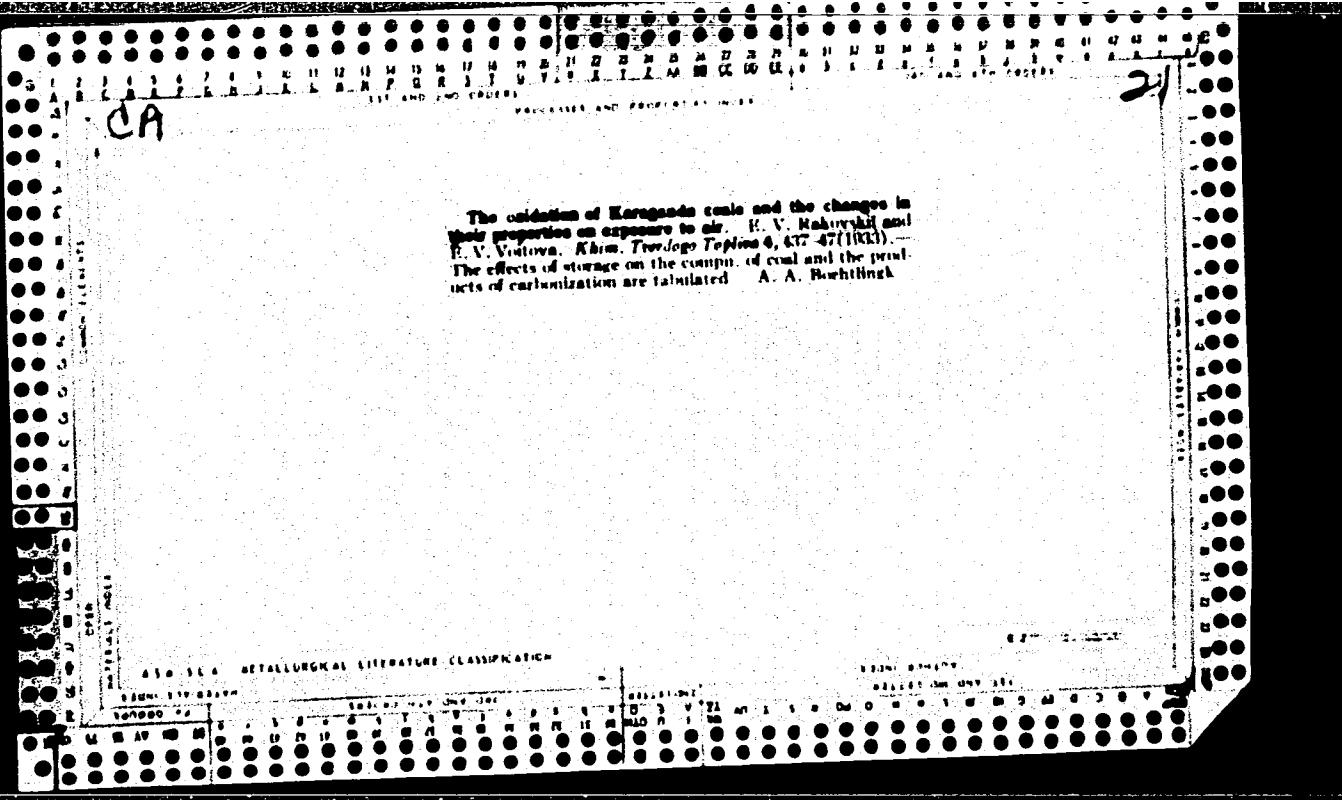
Goryuchiye Slantsy, No 4, 1932

21
The primary tar from the Karaganda coals (the influence of washing and oxidation). E. V. Rakuyashin and N. Karakash. Khim. Tverdogo Teplovo 4, 40-56 (1933). Carbonization yields and composition and physicochemical properties of the tars are given.
A. A. B.

21







CA

21

Humic acids from long-flame coals. B. V. Rakovskii
and O. I. Riguova. *Khim. Tverdogo Zemly*, 9, 42-61
(1981). The following coal, oxidized at 90-100% and
110-120%, was calc'd. with a 2 N soln. of Na₂CO₃ and
NaOH and the ext. treated with a 10% soln. of HCl:
H₂O 32.18, ash 31.32, total S 3.18, N 1.01, C 65.26,
H 4.93, C/H 10.1 and O + S 29.38%. The amounts of
acids and their characteristics are tabulated. For mixed
humic acids, calc'd. with NaOH is best. Humic acids
from oxidized coals are different from those of unoxidized
coals. The humic acids from the Moscow long-flame
coal are different from those of peat and from the acids
obtained from Kassel and Rhine brown coals. A. A. R.

A10-15A - METALLURGICAL LITERATURE CLASSIFICATION

